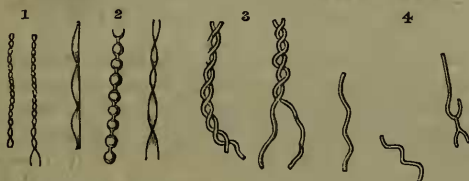


object for the general excellence of an object-glass ; also of the observer's management of the microscope, for the correction must be accurately adjusted, and the filaments must lie flat upon the slide, otherwise the true structure cannot be made out. I shall detail some further particulars in regard to this beautiful and interesting object, in my forthcoming work "On the Microscope as a means of investigation."



1. *Didymohelix ferruginea*, magnified 220 diameters.
2. The filaments seen when lying sideways, or the adjustment and correction not perfect : 700 diameters.
3. The filaments lying flat (800 diameters), and the uncoiled fibres quite distinct.
4. The filaments separated by maceration.

This organism differs in structure from all others known, and cannot be retained in Kützing's genus *Glæotila*. We therefore propose the name *Didymohelix*, to designate the genus in which it must be placed.

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BIBLIOGRAPHICAL NOTICES.

The Botany of the Eastern Borders, with the popular names and uses of the Plants, and of the customs and beliefs which have been associated with them. By G. JOHNSTON, M.D. &c. 8vo. London, 1853.

WE have allowed too long a time to pass since the publication of this very nice book without directing attention to it. Although it is called Vol. I. of a work entitled "The Natural History of the Eastern Borders," it is complete in itself as a Flora of that district, and is provided with a separate title-page accordingly. It will be remembered that some years since Dr. Johnston published an account of the plants of that part of England and Scotland, under the title of "A Flora of Berwick-upon-Tweed," and, as he has continued since that time to add to the amount of his knowledge of the native vegetation of his neighbourhood, the present Flora is the result of very long and extended research. But the book is far from being merely a catalogue of plants, for in addition to a full statement of the loca-

lities inhabited by the species, and the circumstances under which they inhabit them, the author has introduced innumerable notes concerning the topography, antiquities, history, scenic beauty, and folklore of many of the spots mentioned, and interesting biographical sketches of persons connected with the district. We know of no work at all approaching this, in the skill with which a dry botanical catalogue has been converted into a book of high interest even to the non-botanical reader.

The volume commences with a general account of the district, describing its limits, soil, water, climate, coast, mountains and hills, valleys and their rivers. Then follows the Flora, which is made the vehicle for conveying most of the information upon folk-lore, &c., to which we have referred. Then, an interesting tract on "Our Wild-flowers in their relation to our pastoral life" is introduced; and the book concludes with "The Fossil Flora of the Mountain Limestone formation of the Eastern Borders in connexion with the Natural History of Coal," by G. Tate, F.G.S.

There are twelve plates, bearing representations of botanical subjects chiefly, and we are sorry to have to add, that they are several of them far from being such as we could have desired. The representations of the *Hieracia* do not convey to us much idea of the plants intended. In some few cases also the language employed is scarcely so accurate as we expected from a learned and accomplished person. The tendency to the use of hard words is, however, far less manifest than it was in some of the author's former works. We must be allowed to repeat a wish that has been frequently expressed in these Annals, that writers upon Natural History would take care not only not to go out of their way to use the crabbed terms employed by some German scientific men, but would in all cases endeavour to convey their meaning in simple language whenever it can be done without detriment to science.

In looking over this Flora we have marked a few points which seem to deserve notice. The nomenclature is that employed by Sir J. E. Smith, but "when they differ, the names used in Mr. Babington's Manual and in the British Flora, as edited by Professor Arnott, are also given." We doubt that good judgement is shown therein; for, that that nomenclature is often erroneous appears to be proved by the concurrence of the authors of our two above-named modern Floras in its disuse in many cases. We do not blame Dr. Johnston for not adopting the changes made by either one of the writers of these books, but do think that when they concur, and especially when that concurrence is in accordance with the views of the best modern writers on the Flora of Europe, he should have made his nomenclature correspond with theirs.

Ranunculus aquatilis a. "*heterophyllus*, with none of the leaves hair-like." If so, why call it *heterophyllus*? For it is certainly not the plant so named by other botanists, in which the lower leaves are what Dr. Johnston calls "hair-like," and the upper ones flat. The truth is, that he has attempted to include many different plants under the one name of *R. aquatilis*, and has therefore rendered it im-

possible to learn from his book what are really the species that inhabit the border country.

Rubus. Under this heading some very interesting and valuable remarks upon the so-called species of that intricate genus are given. The following is the list of species found in the district:—

R. idæus,	R. carpiniifolius,
R. plicatus,	R. leucostachys,
R. nitidus,	R. rudis,
R. corylifolius,	R. radula,
R. macrophyllus,	R. Kœhleri,
R. cordifolius,	R. cæsius.
R. mucronatus,	

These plants are more or less fully described, and the remarks upon them will doubtless greatly assist the student.

R. corylifolius is stated to be “apparently different” from that of Mr. Babington. We think that it accords with the *var. purpureus* of that botanist.

R. cordifolius. This is distinguished from *R. rhamnifolius*, but we have neither time nor space to enter into a discussion of the correctness of that opinion here.

Ribes rubrum. Dr. Johnston considers that the Gooseberry and Red Currant are indigenous in England, and refers to the late Dr. Bromfield’s elaborate remarks on the subject (*Phytol.* iii. 377) as conclusively supporting their claims. Our author thinks that many plants which are looked upon as doubtful natives, owing to their very local distribution, or their presence now solely in hedgerows or thickets, are aboriginal inhabitants of our country, having once been much more plentiful, but become confined to the few wild spots or artificial localities which they now inhabit by the destruction of the primæval woods. We agree with him in believing that we may carry our scepticism much too far in this matter; and that many of our hedge-plants which have recently been stigmatized as “aliens” are more truly native than several of those which are universally recognized as such. However wise it may be to be cautious in admitting the indigenous character of newly-observed plants or of those inhabiting arable land—and wise it certainly is—we should be especially cautious not to allow our doubts to carry us too far. We would direct attention to Dr. Johnston’s remarks on this subject (pages 53, 84, 139).

Hieracium. A rather full account is given of the species belonging to this ill-understood genus which occur in the district. It does not seem to us to be of nearly so much value as the remarks upon the *Rubi*, but will require to be carefully studied by those who are endeavouring to determine the value of the numerous forms presented to our notice by the British Hawkweeds.

At the end of the list of *Compositæ* we are favoured with a very curious discussion of the question, “What is the Scotch Thistle?” The answer given by Dr. Johnston is that “the evidence seems greatly to strengthen our belief that *Carduus Marianus* was the chosen emblem of the national pride and character.”

In conclusion, we beg leave most cordially to recommend this book to all of our readers, assuring them that, even if very slightly, or not at all acquainted with botany, they will find much to amuse, interest and instruct them.

The Handbook of British Ferns, comprising scientific and popular Descriptions with Engravings of all the Indigenous Species and Varieties, with Instructions for their Cultivation. By T. MOORE, F.L.S. &c. Second edition. London, 1853.

This new edition of Mr. Moore's nice little Handbook is one-half larger than its predecessor, and in many other respects much improved. The introductory remarks upon the structure of Ferns have been very much extended, and a clear statement of the views of Suminski and others on the obscure subject of their reproduction is included amongst them. Then follows an account of the geographical distribution of our native species; directions for their culture; and their classification. In the latter no material change is made from the mode of arrangement that is now most generally adopted, but an account is given of the recent schemes of Mr. J. Smith of Kew, and Mr. Newman, and reasons pointed out which militate against their acceptance. In not adopting the views of those distinguished students of, and writers concerning, Ferns, we think that Mr. Moore has done wisely. It seems to us that the new arrangement derived from the mode in which the fronds are developed from the caudex, and their articulation to it, would lead to the separation of groups far more natural than those which it would form.

With the chapter headed Classification the introductory part of this book may be said to conclude; the remainder of it being occupied by a detailed account of the several genera and species; this part of the work is a very great improvement upon the corresponding part of the former edition.

The *Polypodium alpestre* is placed in that genus, as we think correctly, and we concur with the author in not being as yet convinced that the *Pseudathyrium flexile* of Newman is distinct from it. We believe that our friend Mr. Backhouse does consider that they are different species, and as he has had the opportunity of studying the two plants in their native wilds, and his opinion would otherwise have had considerable weight with us, we think it right to suspend our judgement on the matter, which will doubtless be fully discussed in Mr. Newman's long-delayed new edition of the History of British Ferns.

A very nice figure of the *Gymnogramma leptophylla* is added to this edition. We may hope that now that it has been determined to be certainly a native of Jersey, it will soon be detected in Cornwall or the warm southern part of Devonshire. The botanists of those districts will do well to search carefully for it in spring upon moist banks having a southern aspect.

Mr. Moore has joined the *Lastrea spinulosa* to the *L. cristata*, considering that Mr. Newman's *L. uliginosa* connects them. Doubtless there is much difficulty in determining the true place of *L.*